FY14 ECR MAIL PROCESSING UNIT COSTS

I. PREFACE

A. Purpose and Content

USPS-FY14-18 documents the development of mail processing unit costs by shape for Standard Mail ECR rate categories. It contains printed and electronic documentation of the spreadsheets and programs used to develop these costs.

B. Predecessor Documents

Docket No. R2006-1, USPS-LR-L-107
Docket No. ACR2007, USPS-FY07-18
Docket No. ACR2008, USPS-FY08-18
Docket No. ACR2009, USPS-FY09-18
Docket No. ACR2010, USPS-FY10-18
Docket No. ACR2011, USPS-FY11-18
Docket No. ACR2012, USPS-FY12-18
Docket No. ACR2013, USPS-FY13-18

C. Corresponding Non-Public Document

There is no corresponding non-public document.

D. Methodology

This analysis uses the same basic methodology as described in Docket No. R2006-1, USPS-LR-L-107. The methodology for the calculation of Standard ECR unit costs is the same as used in Docket No. ACR2013, USPS-FY13-18 (FY2013 ECR Mail Processing Costs), spreadsheet FY13 ECR Unit Costs.xls.

E. Input/Output

USPS-FY14-18 relies upon mail processing cost inputs as developed in USPS-FY14-26; volume inputs from USPS-FY14-14 and USPS-FY14-26; and drop shipment avoidances from USPS-FY14-13. It also relies upon the 2014 IOCS data set in USPS-FY14-NP21 and replicates cost distribution and cost pool assignment methodology in USPS-FY14-7.

USPS-FY14-18 outputs are used in the following public folder:

USPS-FY14-3   FY 2014 Discounts and Passthroughs of Workshare Items

II. ORGANIZATION

The main results are presented in the Microsoft Office Excel workbook 'FY14 ECR Unit Costs.xls' in the spreadsheet 'Results.' This spreadsheet is also reported in Table 1 below. Data sources are referenced in each spreadsheet in workbook 'FY14 ECR Unit Costs.xls.' The programs and workbooks used to estimate these costs are described in the Program Documentation section below.

Table 1 FY14 Standard ECR Mail Unit Costs (cents per piece)	
ECR Rate Category	Unit Cost (cents)
Basic Letters	22.878
Saturation Letters	2.090
High Density Letters	1.877
Basic Flats	6.284
Basic Parcels	78.992
Total Basic Nonletters	6.290
Saturation Flats	1.423
Saturation Parcels	0.000
Total Saturation Nonletters	1.423
High Density Flats	2.336
High Density Parcels	0.000
Total High Density Nonletters	2.341

III. PROGRAM DOCUMENTATION

A. Computer Hardware and Software

The FORTRAN programs are run on a HP ProLiant DL560 Gen 8 with four Intel Xeon E5-4650 (each with 8 cores @ 2.70GHz) microprocessors and 256 GB of RAM. The operating system on this computer is Red Hat Enterprise Linux Server release 6.6 (Santiago) with the kernel 2.6.32-504.1.3.el6.x86_64. FORTRAN programs are compiled using GFORTRAN from GNU Compiler Collection (GCC) version 4.4.7, which can be downloaded from http://gcc.gnu.org/fortran . The manual processing spreadsheet work is performed on PCs running the Windows 7 (64-bit) Professional Service Pack 1 operating system and using Microsoft Office Excel 2013 (64-bit) from the Microsoft Office Professional Edition 2013 (64-bit).

USPS-FY14-18 includes electronic versions of all relevant programs, maps, and data files. The compiler used to run the PC-based FORTRAN programs can be downloaded freely from http://gcc.gnu.org/wiki/GFortranBinaries. Download the Windows 64-bit version of GFORTRAN. To compile use the command line: x86_64-pc-mingw32-gfortran.exe –O2 –ffixed-line-length-132 –finit-local-zero – fbounds-check –o {executable name} {program name.f}. The PC-based FORTRAN programs should be run in the same order as the programs are described below.

B. Preparation of the IOCS Data

The following program extracts clerk and mail handler tallies from the 2014 IOCS data set and prepares the tallies for the volume-variable cost distribution for both mail processing and administration/window service costs for clerks and mail handlers as described in USPS-FY14-7.

Program: **cadoc14_prc.f** – Separates the clerk and mail handler tallies from the entire 2014 IOCS data set, separates the tallies between mail processing and administrative/window service, and assigns a cost pool to each tally using the method described in USPS-FY14-7.

Input: **FY14 IOCS Data** – Text flat file version of the submitted SAS IOCS nonpublic data set (USPS-FY14-NP21)
iocs2014_np.h – Declaration of IOCS tally fields
mods_fin14.prn – List of MODS 1&2 finance numbers used to identify MODS 1&2 offices (USPS-FY14-7)
costpools14.prn – Map of mail processing cost pools

Output: **clk_mh_mp14.dat** – IOCS mail processing tallies
clk_mh_aw14.dat – IOCS administrative and window service tallies

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B. Cost Estimates – Clerks and Mail Handlers, Mail Processing

    The following FORTRAN programs replicate the function of the mail processing cost distribution SAS programs documented in USPS-FY14-7. The results of these programs are exported into Microsoft Office Excel where final results are summarized and reported.

Program: **mpproc14_ecr.f** – Estimates the mail processing volume-variable costs by activity code and cost pool.

        Input: **clk_mh_mp14.dat** – IOCS mail processing tallies
                iocs2014_np.h – Declaration of IOCS tally fields
                activity14_ecr.dat – List of the direct and class specific mixed activity codes
                mixclass.intl – List of class specific mixed mail activity codes
                mxmail.ecr.dat – Maps the direct activity codes to their respective class specific mixed mail activity codes
                costpools14_ld15.prn – List of mail processing cost pools and cost pool dollars (USPS-FY14-7)

        Output: **mp14prc_ecr.data** – Estimated mail processing volume-variable costs by cost pool and activity code

Program: **sumclass_ecr.f** – Rolls up the output from mpproc14_ecr.f from activity code to Standard ECR rate category by cost pool and shape

        Input: **mp14prc_ecr.data** – Estimated mail processing costs by cost pool and activity code
                costpools14_ld15.prn – List of mail processing cost pools
                activity14_ecr.dat – List of the direct and class specific mixed activity codes
                classes_cra14.prn – List of CRA subclasses

        Output: **mp14cra_ecr.csv** – Estimated volume-variable costs for Standard ECR mail by cost pool, shape, and ECR rate category

Workbook: **FY14 ECR Mail Proc Costs.xls** – Summarizes estimated mail processing volume-variable costs for Standard ECR mail by cost pool, rate category, and shape.

> Input: **mp14cra_ecr.csv** – Estimated volume-variable costs for Standard ECR mail by cost pool, shape, and ECR rate category
> **FY14 Mail Processing Volume-Variable Costs** – ECR mail processing costs by shape (USPS-FY14-26)

Workbook: **FY14 ECR Unit Costs.xls** – Development of FY14 ECR mail processing unit costs.

> Input: **FY14 ECR Mail Proc Costs.xls**
> **FY14 RPW Volumes** – USPS-FY14-26
> **FY14 RPW Weights** – USPS-FY14-14
> **FY14 Piggyback Factors, Cost Ratios, Volumes, and Reconciliation Factors** – USPS-FY14-26
> **Nontransportation unit cost avoidance per pound per entry point -** USPS-FY14-13